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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,399	03/12/2004	Franz Haselsteiner	HASELSTEINER	7169

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EXAMINER

BRINEY III, WALTER F

ART UNIT	PAPER NUMBER
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2646

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,399

Applicant(s)

HASELSTEINER, FRANZ

Examiner

Walter F. Briney III

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>07/02/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1, 3, 6, 13, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US Patent 6,028,373).**

Claim 1 is limited to a *circuit arrangement for remotely powering a plurality of local systems*. Kim discloses a power supply distributed load startup system. See Abstract. A preferred embodiment is depicted in figure 5. Therein, a *remote power source* (301) is delivered to the primary winding (309) of a *power converting transformer*. The output of the transformer is provided to a plurality of diodes, capacitors and inductors, which form a *processing circuit*. It is clear that each section of the circuit provides current to the loads by way of a *first current path* formed by the magnetic coupling of the transformer windings. In addition, each secondary winding includes an output capacitor, e.g. (507) and (511), which provide stabilization and storage of energy during all operations, including *startup*. Also depicted in figure 5 are a plurality of regulators (331) and (522) that correspond to a *plurality of switches*. These regulators are switched in accordance with the output of the comparator (333) as well as auxiliary comparators (not shown). See column 4, line 63, through column 5, line 67. When connected, the static charge stored on the capacitor plates (507) and (511) will

begin to flow into each connected load, essentially forming a *second current path* that sums with the *first current path* mentioned above. While Kim depicts a battery (301) as the *remote power source*, Kim discloses that the power source can be any known source. See column 3, lines 35-48. Therefore, Kim anticipates all limitations of the claim with the exception of *receiving remote power from a central exchange*.

As noted above, Kim discloses receiving power from any type of power source. The examiner takes Official Notice of the fact that central exchanges, such as AC mains and telephonic central offices, provided power to remote devices.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the power source of Kim using any known power source as suggested by Kim including central exchange power sources as were known in the prior art as central exchange power sources provide tightly controlled and regulated sources are highly reliable.

Claim 3 is limited to *the circuit arrangement of claim 1*, as covered by Kim. The comparator (333) mentioned in the rejection of claim 1 corresponds to a *control circuit* as it controls the switched state of each regulator (i.e. *plurality of switches*). Therefore, Kim makes obvious all limitations of the claim.

Claim 6 is limited to *the circuit arrangement of claim 3*, as covered by Kim. As seen in figure 5, the comparator (333) – i.e. *controller* – is connected to an *output of the energy storage unit capacitor* (507). Therefore, Kim makes obvious all limitations of the claim.

Claim 13 is limited to *the circuit arrangement of claim 1*, as covered by Kim. Kim simply does not disclose the means that are responsive to the control signal (335) generated by the comparator (333). Therefore, Kim makes obvious all limitations of the claim with the exception *wherein the switches are formed by MOSFETs*.

The examiner takes Official Notice of the fact that MOSFET switches were well known at the time of the invention. MOSFETs were typically used for switching arrangements and gating, such as that described by Kim.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the gated voltage regulators using gate-driven MOSFETs as were known in the art since Kim does not disclose how to gate the regulators and because MOSFET devices are more reliable and longer lasting than electromechanical switches.

Claim 14 is limited to *a method for remotely powering a plurality of local systems*. As shown in the rejection of claim 1, Kim makes obvious all the recited structural elements of this method claim. Furthermore, Kim discloses sequentially connecting each load device (LOAD2) through (LOAD"n") to the output of the power converter and the storage capacitors, such that, upon startup, each gated regulator (331) and (522) is open. During which time, the capacitors are being charged. As the voltage presented to each comparator ramps up, each gated regulator is closed in turn from. As a time interval exists between each relay closure, it follows that excessive startup power will not be drawn from the capacitors, resulting in a period for the capacitors to recharge. Therefore, Kim makes obvious all limitations of the claim.

Claim 16 is limited to *the method of claim 14*, as covered by Kim. As mentioned in the rejection of claim 14, the comparator device (333) and others (not shown) detect the charged state of the storage capacitors. Thus, the time taken to charge each capacitor represents a *time interval between two successive starting operations*. Therefore, Kim makes obvious all limitations of the claim.

2. **Claims 1-5, 7-12, 14, 15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kronberg (US Patent 5,119,014).**

Claim 1 is limited to *a circuit arrangement for remotely powering a plurality of local systems*. Kronberg discloses a sequential power-up circuit. See Abstract. The circuit seen in figure 1 includes a controller (38) that allows selective coupling and decoupling of a plurality of *local systems* (64A) through (64J) to a power source (68) by way of a *plurality of switches* (56A) through (56J). However, Kronberg does not detail the structure of the power source (68), only disclosing that it be some type of AC source. Therefore, Kronberg anticipates all limitations of the claim with the exception of *a power converter*.

As is well known in the art, power supplies serve as interfaces between power sources and power loads. The supplies often protect and shape the incoming power signal for optimal use by the load. To this end, Pansier teaches a power supply comprising a circuit for limiting inrush currents. See Abstract. An input AC voltage, such as an AC mains (i.e. *remote power from a central exchange*) is received at terminals (3). It is rectified and filtered (i.e. *stored*) by capacitor (7). The AC voltage is then inverted into an AC signal of the appropriate size and frequency at terminals (13).

In addition, the rectified input AC power is current limited by elements (15) and (17) during the initial startup phase of the power supply. With respect to the claim limitations, the rectifier (1) corresponds to a *power converter*, the diode between the rectifier and resistor (15) corresponds to a *processing circuit* and the capacitor (7) corresponds to an *energy storage unit*. It is clear that a *first current path* is formed through the diode and resistor, while a *second current path* is formed from the charged positive plate of the capacitor (7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to interface and protect the loads of Kronberg with the AC power supply as taught by Pansier for the purpose of reducing damage because of inrush currents during the startup phase described in both Kronberg and Pansier.

Claim 2 is limited to *the circuit arrangement of claim 1*, as covered by Kronberg in view of Pansier. The loads disclosed by Kronberg are clearly AC power *network terminations*. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 3 is limited to *the circuit arrangement of claim 1*, as covered by Kronberg in view of Pansier. As mentioned in the rejection of claim 1, Kronberg discloses a controller (38) for controlling the switches (56A) through (56J). See column 5, line 7, through column 6, line 64. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 4 is limited to *the circuit arrangement of claim 3*, as covered by Kronberg in view of Pansier. Kronberg discloses that the controller selectively enables each load

connection based on the time constant defined by resistor (40) and capacitor (46), essentially creating a *timing circuit*. See column 5, lines 58-61. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 5 is limited to *the circuit arrangement of claim 3*, as covered by Kronberg in view of Pansier. Kronberg discloses that the controller (38) comprises an integrated circuit driving device (50); i.e. a *microprocessor*. See column 7, lines 8-12. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 7 is limited to *the circuit arrangement of claim 1*, as covered by Kronberg in view of Pansier. Seen in figure 1 of Pansier, the storage device (7) is decoupled from the output of the converter and processor by resistor (15), or *decoupling element*. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 8 is limited to *the circuit arrangement of claim 8*, as covered by Kronberg in view of Pansier. Pansier discloses that element 15 is a *resistor*. See column 4, lines 32-34. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 9 is limited to *the circuit arrangement of claim 8*, as covered by Kronberg in view of Pansier. Pansier discloses that element 15 is a resistor, which is inherently a *current limiter*. See column 4, lines 32-34. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 10 is limited to *the circuit arrangement of claim 8*, as covered by Kronberg in view of Pansier. Switch (17) essentially controls the value of the resistor (15), making

the *decoupling element controllable*. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 11 is limited to *the circuit arrangement of claim 10*, as covered by Kronberg in view of Pansier. As stated in the rejection of claim 1, Kronberg includes a controller (38) for controlling the power-up sequence of the plurality of loads (64A) through (64J). In addition, Pansier includes a start circuit that controls the switch (17). Both of these controllers relate to a *control circuit* as generally claimed. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 12 is limited to *the circuit arrangement of claim 11*, as covered by Kronberg in view of Pansier. The circuit of Pansier includes a detection circuit (20), which essentially measures the current received by the converter as a function of how much current is flowing through the current limiter (15) and its associated bypass switch (17). This detection circuit corresponds to a *measuring unit that measures a power received by the energy converter*. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 14 is limited to *a method for remotely powering a plurality of local systems*. As shown in the rejection of claim 1, the combination of Kronberg in view of Pansier makes obvious all the recited structural elements of this method claim. Furthermore, Kronberg discloses sequentially connecting each load device (64A) through (64J) to the power source (68). Such that, upon startup, each relay (56A) through (56J) is open. During which time, the capacitor (7) of Pansier is being charged. As the control circuit of Kronberg ramps up, each relay is closed in order from (56A) through (56J). As a time

interval exists between each relay closure, it follows that excessive startup power will not be drawn from the capacitor (7), resulting in a period for the capacitor (7) to recharge. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 15 is limited to *the method of claim 14*, as covered by Kronberg in view of Pansier. The loads disclosed by Kronberg are clearly AC power *network terminations*. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 17 is limited to *the method of claim 14*, as covered by Kronberg in view of Pansier. Seen in figure 1 of Pansier, the storage device (7) is decoupled from the output of the converter and processor by resistor (15), or *decoupling element*. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.

Claim 18 is limited to *the method of claim 14*, as covered by Kronberg in view of Pansier. The circuit of Pansier includes a detection circuit (20), which essentially measures the current received by the converter as a function of how much current is flowing through the current limiter (15) and its associated bypass switch (17). This detection circuit and its associated steps correspond to *determining the remote power available from the central exchange power and controlling the decoupling element based on the determined available power*. Therefore, Kronberg in view of Pansier makes obvious all limitations of the claim.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WFB
6/13/05


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SUPERVISORY PATENT EXAMINER